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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,653	11/26/2003	Edmund A. Flexman	AD6924 US NA	8786

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EXAMINER

KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,653

Applicant(s)

FLEXMAN ET AL.

Examiner

Kevin R. Krueer

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on February 28, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-15 is/are pending in the application.
- 4a) Of the above claim(s) 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 11-14, in the reply filed on February 28, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections

2. The rejection of claims 1-5, 8, and 9 under 35 USC 102(b) as being anticipated by Kosinski (US 5,237,008) has been overcome by amendment. Applicant amended independent claim 1 to include the Markush group of claim 6.

3. The rejection of claim 14 under 35 USC 103(a) as being unpatentable over Kosinski (US 5,237,008), as applied to claims 1-5, 8, and 9 above, and further in view of Shofner et al (US 3,813,212) has been overcome by amendment. Applicant amended independent claim 1 to include the Markush group of claim 6.

4. The rejection of claims 1, 5, 6, 7, and 9 under 35 USC 103(a) as being unpatentable over JP 2002309064A (herein referred to as Nakamura) in view of Kosinski (US 5,237,008) has been overcome by amendment. Applicant amended independent claim 1 to include the Markush group of claim 6.

5. The rejection of claims 1, 5, 8, 9, and 11 under 35 USC 102(b) as being anticipated by JP2002192663A (herein referred to as Polyplastics) has been overcome by amendment. Applicant amended independent claim 1 to include the Markush group of claim 6.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-5, 8, and 9 are rejected under 35 USC 103(a) as being unpatentable over Kosinski (US 5,237,008) in view of Kuduo et al (US 6,930,145).

Kosinski teaches incorporating 0.2-3.0wt% of linear low-density polyethylene into polyoxymethylene composition (abstract). The polyoxymethylene may be branched or linear and will have a number average molecular weight of 10,000-1000,000 (col 3, lines 45+). Said composition may be laminated to other layers (col 6, lines 1+). Herein, the LDPE is understood to read on the claimed "at least one additional non-acetal polymer" of claim 5.

Kosinski does not teach the composition should further comprise 0.5-60wt% of a polyamide elastomer. However, Kuduo teaches a composition comprising (a) polyoxymethylene resin, (b) 0.5-60pbw polyamide elastomer, and (c) an acid modified olefinic resin (abstract). The composition has excellent impact resistance, antistatic properties and heat stability (abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add 0.5-60pbw polyamide elastomer to the composition taught in Kosinski. The motivation for doing so would have been to improve the impact resistance, heat stability, and antistatic properties of the composition. Furthermore, it would have been obvious to acid modify the LDPE taught in Kosinski. The motivation for doing so would have been increase adhesion between the polyamide elastomer and the polyoxymethylene resin (col 5, lines 43+).

8. Claims 1, 5, 8, 9, and 11 are rejected under 35 USC 103(a) as being unpatentable over JP2002192663A (herein referred to as Polyplastics) in view of Kuduo et al (US 6,930,145).

Polyplastics teaches an intermediate layer with a layer of polyolefin and a layer of polyoxymethylene on either side of it. The layers have a specified volume of polyolefin and polyoxymethylene such that the ratio of polyolefins in the layers satisfies a predetermined relationship. The intermediate layer comprises 20-80vol% polyolefin, and 20-80vol% polyoxymethylene. Furthermore, the polyolefin layer comprises 100-50vol% polyolefin and the polyoxymethylene layer comprises 100-45vol% polyoxymethylene.

Polyplastics does not teach the polyoxymethylene layer and the intermediate layer should further comprise 0.5-60wt% of a polyamide elastomer. However, Kuduo teaches a composition comprising (a) polyoxymethylene resin, (b) 0.5-60pbw polyamide elastomer, and (c) an acid modified olefinic resin (abstract). The composition has excellent impact resistance, antistatic properties and heat stability (abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add 0.5-60pbw polyamide elastomer to the polyoxymethylene compositions taught in Polyplastics. The motivation for doing so would have been to improve the impact resistance, heat stability, and antistatic properties of the composition. Furthermore, it would have been obvious to acid modify the olefinic compositions of the

Art Unit: 1773

intermediate layer. The motivation for doing so would have been to increase adhesion between the polyamide elastomer and the polyoxymethylene resin (col 5, lines 43+).

9. Claim 14 is rejected under 35 USC 103(a) as being unpatentable over Kosinski (US 5,237,008) in view of Kuduo (US 6,930,145), as applied to claims 1-5, 8, and 9 above, and further in view of Shofner et al (US 3,813,212)

Kosinski in view of Kuduo is relied upon as above, but does not teach that the polyoxymethylene layer should be flame treated prior to lamination. However, Shofner teaches it is well known in the art to flame treat a thermoplastic polymer prior to lamination in order to improve adhesion (col 1, lines 8+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to surface treat the polyoxymethylene layer taught in Kosinski. The motivation for doing so would have been to improve the interlayer adhesion of the laminate.

10. Claims 1, 5, 7, and 9 are rejected under 35 USC 103(a) as being unpatentable over JP 2002309064A (herein referred to as Nakamura) in view of Kosinski (US 5,237,008).

Nakamura teaches a composition comprising 100pbw polyoxymethylene and 0-100pbw of a polycarbonate resin (abstract). Said composition has excellent impact resistance, dimensional stability, and mechanical properties (abstract).

Nakamura does not teach said layer may be laminated to other layers. However, Kosinski teaches it is known in the art to laminate polyoxymethylene layers to other layers. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to laminate the resin composition taught in Nakamura to

Art Unit: 1773

another layer. The motivation for doing so would have been that Kosinski teaches it is known to laminate polyoxymethylene layers to other layers for use in desired arts.

11. Claims 1, 5, 7, and 9-13 are rejected under 35 USC 103(a) as being unpatentable over JP02027615A (herein referred to as Nakagawa) in view of JP 2002309064A (herein referred to as Nakamura) for reasons of record.

Nakagawa teaches a laminate comprising 2 insulating layers. The first comprises a signal wire, a first grounding conductor, a second grounding conductor, and polyoxymethylene. The second comprises polyoxymethylene. The conductor is formed by lamination with an epoxy glue. Herein the conductor is understood to read on the discontinuous layer of claim 10, and the epoxy adhesive is herein understood to read on the epoxy of claims 12 and 13. The 2 insulating layers are understood to be continuous with one another.

Nakagawa does not teach the polyoxymethylene layer should comprise the claimed composition. However, Nakamura teaches a composition comprising 100pbw polyoxymethylene and 0-100pbw of a polycarbonate resin (abstract). Said composition has excellent impact resistance, dimensional stability, and mechanical properties (abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the resin taught in Nakamura in place of the polyoxymethylene taught in Nakagawa. The motivation for doing so would have been to improve the impact resistance, dimensional stability, and mechanical properties of said laminate.

Response to Arguments

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection. The grounds of rejection were changed in view of the amendment to independent claim 1.

In order to expedite prosecution, the examiner will take this opportunity to respond to some of applicant's arguments that may be relevant to the new grounds of rejection.

With respect to Nakamura in view Kosinski, Applicant argues neither references hints, suggests, or contains even a throw away statements that remotely points to the recited and disclosed technical solution of the present invention, i.e., a polyoxymethylene blend substrate that promotes adhesion between the substrate and at least one layer adhered to it, thereby allowing application of a coating or a paint. The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessarily that the prior art suggest the combination to achieve the same advantage or result discovered by applicant. Applicant argues the claimed invention exhibits enhanced adhesion between the polyoxymethylene substrate and a layered adhered to it, but has not explained how said argument of unexpected results is supported by the data of record. Applicant makes similar arguments with respect to the rejection based upon the teachings of Nakagawa in view of Nakamura. Said arguments are not persuasive for the reasons noted above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1773

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Kevin R. Kruer'.

Kevin R. Kruer
Patent Examiner-Art Unit 1773